Micro-Bioretention MB-2 Finsihed Grade: /Min 2' Wide Berm Min Elev. = "G" Dim "A" Top of Sand Elev. = "B" Top of Gravel Elev. = "C" 6" Clean Sand 6" Perf. PVC Invert Elev. = "D" 15" Clean Gravel Bottom of Excavation = Elev. "E" Aggregate Below Underdrain Dim "B" Scale: Not to Scale 1"=5'

Micro-Bioretention MB-3 Str. 238 - "E" Inlet. See C4.11 Overflow Crest and ESDv Ponding Elev. = "F" Ponding = "H" Min 2' Wide Berm Aggregate Below 15" HDPE To STR. 236. NTS. See Plan View, and See C4.31,32 for Invert Elevations and Pipe Schedules. 6" PVC Perf. Per Spec. Underdrain Dim "B" (Typ.), See Sheet C4.11 Invert Elev. = "D" Btm. of Inlet NTS Scale: 1"=5'

Micro-Bioretention Facility MB-2 and MB-3 Design Information

Facility MB-2 Facility MB-3

466.40'

462.90'

462.40'

461.40'

461.15'

466.90'

467.40'

467.07'

3.50'

0.20'

238

351 sq. ft. 589 sq. ft.

715 cu. ft. 1,269 cu. ft.

Micro-Bioretention Detailed Plan View MB-2

MB-2Total Perforated Underdrain Length: 46 FT

<u>MB-3</u> Total Perforated Underdrain Length: 51 FT

Micro-Bioretention Detailed Plan View MB-3

[[a],   A	Top of Planting	Design	468.20'	466.40
Elev. "A"	Media	As-Built		
Clay "D"	Top of Cond	Design	468.20'	462.90
Elev. "B"	Top of Sand	As-Built		
Elev. "C"	Top of Croval	Design	464.20'	462.40
Liev. C	Top of Gravel	As-Built		
Elev. "D"	PVC Underdrain	Design	463.20'	461.40
Elev. D	Invert	As-Built		
Elev. "E"	Bottom of	Design	462.95'	461.15
Elev. E	Excavation	As-Built		
Elev. "F"	Overflow & ESDv	Design	468.70'	466.90
Elev. F	Ponding Elev.	As-Built		
Elev. "G"	Min. Top of Birm	Design	469.20'	467.40
Liev. G	Milli. TOP OF BIITH	As-Built		
Elev. "H"	10-Year Ponding	Design	468.83'	467.07
Liev. n	Elev.	As-Built		
Dim. "A"	Planting Media	Design	3.50'	3.50'
	Thickness	As-Built		
Dim. "B"	Aggregate Below	Design	0.25'	0.20'
	Underdrain	As-Built		
Facili	ty Surface Area	Design	351 sq. ft.	589 sq.
- 4011		As-Built		
ES	Dv Provided	Design	715 cu. ft.	1,269 cu
		As-Built		
	ceiving Storm Drair		240	238
*Se	ee Detailed Plan Vi	ews & Deta	ails for More Dir	mensions.

ID Descriptor

Micro-Bioretention MB-2 Micro-Bioretention MB-3 Str. 240 "E" Inlet. See C4.11 Overflow Crest and ESDv -Cleanout (Typ). See C4.11 Ponding Elev. = "F" 10-Year /-Min 2' Wide Berm. Min Elev. = "G" Finsihed Grade: Top of Planting Media Finsihed Grade: 15" HDPE from Str. 244. NTS. See Plan
View, and See C4 31,32 for Invert
Elevations and Pipe Schedules.— Dim "A" Top of Sand Elev. = "B" Top of Gravel Elev. = "C" 6" Clean Sand — 90° Elbow (Typ.) ∽6" PVC Perf. Per \$pec. 6" Perf. PVC Invert Elev. = "D" 15" HDPE FROM STR. (Typ.), Sheet C4.11 Aggregate Below 242. NTS See C4.31,32 Bottom of Excavation = Elev. "E" Invert Elev. = "D" Underdrain Dim "B" ~15" HDPE to Str. 236. NTS. See Plan Aggregate Below — View, and See C4.31,32 for Invert Elevations and Pipe Schedules. Underdrain Dim "B" ➤Btm. of Inlet NTS Scale: 1"=5'

I I SEE	C4.11 FOR:
	REQUIRED AGGREGATE GRADATION
2.	SAND SPECIFICATIONS
$1 \overline{3}$	BIORETENTION AREA PLANTING SOIL
	DOCUMENTATION REQUIREMENTS
	MICRO-BIORETENTION AREA
	SPECIFICATIONS

CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY	MB	3-2	МЕ	3-3
STAGE	MCDPS INSPECTOR	OWNER/ DEVELOPER	MCDPS INSPECTOR	OWNER/ DEVELOPER
MANDATORY NOTIFICATION: Inspection and approval of each practice is required at these points prior to proceeding with construction. The permittee is required to give the MCDPS Inspector twenty-four (24) hours notice (DPS telephone 311). The DPS inspector may waive an inspection and allow the owner/developer to make the required inspection per a prior scheduled arrangement which has been confirmed with the DPS inspector in writing. Work completed without MCDPS approval may result in the permittee having to remove and reconstruct the unapproved work. Upon completion of the project, a formal Stormwater Management As-Built must be submitted to MCDPS unless a Record Drawing Certification has been allowed instead. Each of the steps listed below must be verified by either the MCDPS Inspector OR the Owner/Developer.	INITIALS/DATE	INITIALS/DATE	INITIALS/DATE	INITIALS/DATE
1. Excavation for Micro Bioretention facility conforms to approved plans				
2. Placement of stone backfill and underdrain system conforms to approved plans				
3. Placement of filter media conforms to approved plans				
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans				
5. Final grading and permanent stabilization conforms to approved plans				

The contractor is required to contact the Design Engineer at (301) 670-0840 with at least 24 hours advance notice at the following stages of Micro-Bioretention (MB), Micro-Bioretention w/ Impervious Liner (MB(L)), Planter Box Micro-Bioretention (PB), and/or Bio-Swale (BS) facility construction:
<ul> <li>Facility excavation: MB, MB(L), BS</li> <li>Concrete slab and wall form work: PB</li> <li>Installation of impervious liner: MB(L)</li> <li>Aggregate installation</li> <li>Underdrain layout and installation</li> </ul>

Design Engineer SWM Construction Observation Requirements

 Underdrain layout and installation Sand layer installation Planting media installation

• SWM plantings and landscaping installation

Failure to notify the Design Engineer may necessitate SWM facility reconstruction.

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	BIORETENTION FACILITY MAINTENANCE SCHEDULE		
	TASK	RECOMMENDED INTERVAL	
	INSPECT AND REPAIR SOIL EROSION	MONTHLY AND AFTER HEAVY RAINS	
	REMOVE LEAVES, DEBRIS, TRASH, SILT, ETC. & REPLACE MULCH LAYER	MINIMUM 2 TIMES PER YEAR (SPRING AND FALL)	
	INSPECT PLANTS FOR DAMAGE & DISEASE/PEST PROBLEMS PRUNE AND TREAT PLANTS AS NEEDED & AS APPROPRIATE PER SPECIES. REMOVE AND REPLACE DEAD AND DISEASED PLANTS CONSIDERED BEYOND TREATMENT	MINIMUM 2 TIMES PER YEAR (3/15-4/30 and 10/1-11/30)	

NOTE: Contractor shall confirm that dimensions, inflow locatoins, roof leader locations and other design elements of ALL ESD/SWM facilities as shown on these plans are coordinated with architectural and other trade plans. If any discrepancies are found, the Contractor is to contact the design engineer and architect prior to proceeding with construction. Site utilities are to be constructed in locations shown. If a utility location is changed and is found to conflict with a ESD/SWM facility, the facility must be reviewed and approved by the County, Design Engineer, Architect and appropriate trade prior to utility construction. Modifications to the Stormwater Management Plan will require a formal revision to the plan with the Montgomery County Department of Permitting Services, which will include applicable plan revision fees, and may not be acceptable.

SM#285890

SC#286335 SC010MB2MB3

Sheet 10 of 28

SWM MB-2, MB-3 PLAN VIEW AND DETAILS

9211 CORPORATE BLVD, SUITE 340 ROCKVILLE, MD 20850 301-770-0177(P) 301-330-3224(F)

MACRIS, HENDRICKS & GLASCOCK 9220 WIGHTMAN RD, SUITE 120 **MONTGOMERY VILLAGE, MD 20886** 301-670-0840(P)

**ARCHITECT** 

STRUCTURAL COMPREHENSIVE STRUCTURAL SOLUTIONS 9220 WIGHTMAN RD, SUITE 120 MONTGOMERY VILLAGE, MD 20886

MECH./ELECTRICAL/PLUMBING

BALTIMORE, MD 21117

410-265-6100(P)

240-200-5599(P)

JAMES POSEY ASSOCIATES 11155 RED RUN BLVD, SUITE 310

**KITCHEN NYIKOS-GARCIA FOODSERVICE DESIGN, INC** 18219-A FLOWER HILL WAY

**SUSTAINABILITY** 

**GAITHERSBURG, MD 20879** 240-683-9530 (P)

DOO CONSULTING, LLC 531 PICCADILLY ROAD

**BALTIMORE, MD 21204** 

443-653-3792 (P)

SKANSKA USA BUILDING INC.

**CONSTRUCTION MANAGER** 

700 KING FARM BLVD, SUITE 200 ROCKVILLE, MD 20850 301-795-3100 (P)

Professional Certification. hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Enegineer under the laws of the State of Maryland, License No.: 16905, Expiration Date: 4.21.2022.

**PROFESSIONAL SEAL:** 

**PRINTS ISSUED** 

NO:	DESCRIPTION:	DATE:
1	BID DOCUMENTS	10/21/2020
	ADDENDUM #2	11/25/2020
3	ADDENDUM #3	12/01/2020
4	ADDENDUM #4	12/03/2020
5		

WSSC 224NW09 TAX MAP FT62 PLAT 12762

9TH ELECTION DISTRICT

CITY OF GAITHERSBURG, MD

**GAITHERSBURG CLUSTER ELEMENTARY** SCHOOL #8

**MONTGOMERY COUNTY PUBLIC SCHOOLS** 

SOIL EROSION, SEDIMENT CONTROL AND STORMWATER MANAGEMENT PLAN